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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHANG, YEAN HSI

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,243

Applicant(s)

ERSKINE, TERRY LEE

Examiner

Yean-Hsi Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to because of the following informalities: The "a first position" and "a second position" on lines 3-5 should not use "a" as an article if they refer to the same positions as claimed in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ayd et al. (US 6,137,684).

Ayd teaches a handle (13, fig. 1) for a plug-in power supply (15), the handle comprising: a first arm (46) with a proximal end (left in fig. 1) and a distal end (26), the first arm defining a bore (shown on 46 in fig. 1, not labeled) between the proximal end and the distal end, where the handle couples to the power supply through the bore (as shown in fig. 1), where the handle is adapted to pivot about the bore, a grasping portion (portion pointed by 13, fig. 1) coupled to the proximal end of the first arm, a cam (26)

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coupled to the distal end of the first arm, where the cam is adapted to permit partial insertion but prevent full insertion of the plug-in power supply when the handle is pivoted to a first position (shown in fig. 3) and to permit full insertion of the plug-in power supply when the handle is pivoted to a second position (shown in fig. 5), and a hook (at 26, fig. 1) coupled to the distal end of the first arm, where the hook is adapted to hold the power supply in an inserted position when the handle is pivoted to the second position (as shown in fig. 5) (claim 17); a second arm (46, fig. 1, see col. 4, lines 39-43) substantially symmetrical to the first arm, wherein the grasping portion is disposed between the proximal end of the first arm and a proximal end of the second arm (shown in fig. 1) (claim 18); wherein the cam is further adapted to lever against a surface (52) to eject the power supply out of an inserted position when the handle is pivoted from the second position to the first position (claim 19); and where the power supply has a front side and a back side (shown in fig. 1, not labeled), where the power supply is adapted to plug in with the back side (fig. 1), where the handle is mounted to the front side of the power supply (fig. 1), wherein the hook is further configured to not extend beyond a bottom surface of the power supply when the handle is pivoted to the first position (fig. 1), and wherein the hook is configured to extend beyond the bottom surface of the power supply when the handle is pivoted to the second position (shown in fig. 5) (claim 20).

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colver et al. (US 6,293,828 B1) in view of Ayd et al.

Colver teaches a power supply (100, fig. 1) adapted to slide into an equipment rack (800, fig. 8), the power supply comprising: a housing (102) with an interior (fig. 1), wherein the interior of the housing is adapted to house electronic circuits for the power supply (inherent feature), at least one connector (302) on a back end of the housing (fig. 3), where the connector electrically couples the power supply to the equipment rack via electrical contacts (304, 308, 310 and 312), where the electrical contacts include at least pre-charge contacts (310) and regular power contacts (308), and a mechanical interlock arrangement (132-136, fig. 4 and 902-906, fig. 9) coupled to the power supply, having at least a first state (fig. 4) and a second state (fig. 6), wherein the mechanical interlock arrangement permits partial insertion of the power supply into the equipment rack in the first state (when 134 touching 902), and where the mechanical interlock arrangement permits full insertion of the power supply into the equipment rack in the second state (134 fitting in slot 904, also see col. 11, lines 56-66 and col. 12, lines 62-63) such that the regular power contacts can have electrical continuity with corresponding contacts in the equipment rack (claim 1); wherein the pre-charge contacts and the regular power contacts extend from the power supply by substantially

the same amount (see col. 6, lines 20-25), and where the corresponding contacts in the equipment rack for pre-charge contacts extend out farther than the corresponding contacts in the equipment rack for regular power contacts (see col. 6, lines 28-29) (claim 2); wherein the pre-charge contacts extend from the power supply by a larger amount than the regular power contacts (see col. 6, lines 28-29) (claim 3); a bezel (in the front of 102 not labeled) disposed at the front side of the housing, where the mechanical interlock arrangement is coupled to the bezel (132 being coupled to the bezel as shown in fig. 6) (claim 7); wherein the mechanical interlock arrangement further comprises a movable cam (134), where the cam is adapted to assume a first position (fig. 4) in response to the first state of the mechanical interlock arrangement and is further adapted to assume a second position (fig. 6) in response to the second state of the mechanical interlock arrangement (claim 8); and wherein the cam is further configured to contact a front surface (902) of the equipment rack (claim 9).

Colver fails to teaches while the mechanical interlock arrangement being in the first state, the pre-charge contacts have electrical continuity with corresponding contacts in the equipment rack and interferes with full insertion such that the regular power contacts do not have electrical continuity with corresponding contacts in the equipment rack. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the mechanical interlock arrangement of the device of Colver by adjusting the location of the surface 902 such that when the mechanical interlock arrangement is in the first state, the pre-charge contacts have electrical continuity with corresponding contacts in the equipment rack and interferes with full

insertion such that the regular power contacts do not have electrical continuity with corresponding contacts in the equipment rack, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955), MPEP §2144.04, IV A.

Colver also fails to teach the power supply further comprising a handle configured to pivot between a first position and a second position, the cam of the handle pushing a front surface for ejecting the power supply, and a hook at the end of the handle adapted to hold the power supply in an inserted position.

Ayd teaches: a handle (13, fig. 1) for a plug-in power supply (15) as stated in section 3, hereinabove, wherein the movement of the handle controls a mechanical interlock arrangement moving between a first state of the mechanical interlock arrangement and a second state of the mechanical interlock arrangement, wherein the power supply defines a space around a portion of the handle (see fig. 5) to permit a user to grab the handle; a cam (26) at an end of an arm of the mechanical interlock arrangement, wherein the cam pushes a front surface (52) for ejecting the power supply when the handle moves from the second position toward the second position; and a hook (shown in fig. 1, not labeled) formed at the end of the mechanical interlock arrangement adapted to hold the power supply in an inserted position, and wherein the hook is further configured to retract from a bottom surface of the power supply when the mechanical interlock is in the first state (fig. 1), and where the hook is configured to

extend from the bottom surface of the power supply when the mechanical interlock arrangement is in the second state (fig. 5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Colver with the mechanical interlock arrangement taught by Ayd for conveniently inserting and withdrawing a power supply unit from equipment rack.

6. Claims 4 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colver et al. in view of Ayd et al., further in view of Edevold et al. (US 6,374,460 B1).

Colver et al. in view of Ayd et al. discloses the claimed invention except at least one opening in a bottom surface of the opening, and a fastener and a latch provided with the mechanical interlock arrangement.

Edevold teaches a power supply (78, fig. 11) slidably mounted in an opening (shown in fig. 11, not labeled) of a mounting rack (70), comprising a mechanical interlock arrangement (54) including: a handle (20) having a hook (30) being configured to engage an opening (to the right of part 76, fig. 12) defined in a bottom surface of the mounting rack when the handle is moved from a first position (not shown) to a second position (fig. 11) (claims 4 and 13); and a fastener (62) adapted to maintain the handle in the second position such that the power supply cannot be removed from the equipment rack (claim 14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Colver in view of Ayd with the mechanical interlock arrangement taught by Edevold for preventing the handle moved inadvertently from the second position.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colver et al. in view of Ayd et al., further in view of Bologna et al. (US 6,442,021 B1).

Colver et al. in view of Ayd et al. discloses the claimed invention except the housing comprising tongues adapted to fit into corresponding grooves in side walls of openings in the equipment rack.

Bologna teaches a housing (60, fig. 2) of an electronic equipment (20), comprising tongues (118) adapted to fit into corresponding grooves (64) in side walls (34 and 36) of a opening (28) in the equipment rack (24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Colver et al. in view of Ayd et al. with the mounting features taught by Bologna for purposes of densely mounting and easily hot-swapping.

Allowable Subject Matter

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8. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: The best prior art of record, Ayd et al. (US 6,137,684), Colver et al. (US 6,293,828 B1), and Bolognia et al. (US 6,442,021 B1), taken alone or in combination, fails to teach or fairly suggest: a mechanical interlock arrangement of a power supply unit, comprising a latch automatically engaging the mechanical interlock arrangement in a latched state when the mechanical interlock arrangement transitions from a second state (inserted state of the power supply) to a first state (ejected state of the power supply) as set forth in claim 15.

Correspondence

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yean-Hsi Chang whose telephone number is (571) 272-2038. The examiner can normally be reached on 08:00 - 16:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the Art Unit phone number is (571) 272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained

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from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8558.

Yean-Hsi Chang
Primary Examiner
Art Unit: 2835
May 6, 2005


YEAN-HSI CHANG
PRIMARY EXAMINER